



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,409	02/20/2004	Sven Bulow	KLAUS2.005AUS	6350

20995 7590 04/15/2010
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

JUNG, UNSU

ART UNIT	PAPER NUMBER
----------	--------------

1641

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

04/15/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No. 10/783,409	Applicant(s) BULOW, SVEN	
	Examiner UNSU JUNG	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on March 29, 2010 has been entered. The submission did not include any claim amendments.

Status of Claims

2. Claims 1-6 are pending and under consideration for patentability under 37 CFR 1.104.

Priority

3. The instant application has a filing date of February 20, 2004 and does not claim for the benefit of a prior-filed application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1641

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (U.S. Patent No. 5,916,526, June 29, 1999) in view of Skinner et al. (U.S. PG Pub. No. US 2002/0155490 A1, October 24, 2002) (hereinafter "Skinner").

Robbins teaches a multi-well container (chamber array arrangement) comprising a rectangular array of tubes in standard multi-well plate tube array format (see entire document, particularly Abstract). The multi-well container of Robbins have tubes (containers) subdivided by partitions (containers having at least two chambers) with circular bottom, which is tapered (Fig.'s 1 and 2), in standard 96-well/microtiter plate format. Each chamber in a tube can contain reagents necessary for use in variety of screening assays (column 1, lines 19-28 and column 5, lines 11-18). Such reagents can be stored and removed from the tubes (column 5, lines 11-18), which reads on the feature of the probe carrier essentially freely movable in said particular chamber.

Therefore, the tubes of Robbins have a circular bottom having a surface area which is smaller than the bottom surface area of a well of a standard 96 well microtiter plate.

With respect to claim 2, Robbins teaches that the chamber array arrangement further comprises a cover arranged on one or more of said at least two chambers (column 7, lines 60-63).

With respect to claim 5, Robbins teaches that a lid or cover can be placed on the tubes, which necessarily means that the cover of Robbins is a separate entity that can be removed from the chamber array arrangement.

With respect to claim 6, Robbins teaches that the chamber array arrangement further comprises a carrier (plate 16 in Fig. 1) having a location adapted to receive said container (column 4, lines 52-65).

However, Robbins fails to teach that the probe carrier is in the form of a solid particle.

Skinner teaches a particle comprising a surface defining spatially distributed codes for identifying the particle and functional binding moieties (see entire document, particularly Abstract). The particles of Skinner can be used in variety of biological assays including in PCR in which probes are labeled with particles capable of producing characteristic electromagnetic emission intensity profile corresponding to the identity of the probe among a library of probe molecules (p8, paragraph [0065]-p9, paragraph [0073]).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to employ probe carrier in the form of solid particles as

taught by Skinner in the chamber array arrangement of Robbins since the particles of the Skinner provides optical coding information associated with the identify of the probes. The advantage of optically coding the probe molecules for identification of the PCR products provides the motivation to include the probe carriers of Skinner in the chamber arrangement of Robbins with a reasonable expectation of success.

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins (U.S. Patent No. 5,916,526, June 29, 1999) in view of Skinner (U.S. PG Pub. No. US 2002/0155490 A1, October 24, 2002) as applied to claims 1 and 2 above, and further in view of Mainquist et al. (U.S. Patent No. 6,534,014, published on Mar. 18, 2003 and filed on May 11, 2000) (hereinafter "Mainquist").

Robbins in view of Skinner teaches a chamber array arrangement for performing screening assays as set forth above. Although Robbins teaches a cover, which would allow to retain the probe or probe pool essentially completely in the respective chamber, Robbins in view of Skinner fails to teach a chamber array arrangement, wherein the cover being a membrane (non-bonding material) having a pore size smaller than the size of the probe carrier with the probe attached or of the free probe.

Mainquist teaches a specimen plate lid (cover) that provides enhanced sealing and provides increased efficiency in placement on a specimen plate or removal from a specimen plate (see entire document, particularly column 2, lines 10-14). It is known to provide a lid to cover a specimen plate (column 1, lines 44-55). For example, the samples in the wells may need to incubate or it may be desired to store the samples for

Art Unit: 1641

an extended period of time (column 1, lines 44-49). By covering the wells, contamination and evaporation may be reduced (column 1, lines 44-49). It is an advantage of specimen plate lid that it can be accurately and relatively efficiently positioned on a specimen plate (column 2, lines 52-54). Since the lid and its compressible seal alone provide a good barrier between the specimen plate wells and the outside environment, additional mechanical and adhesive sealing is not required (cover made from a non-bonding material, column 2, lines 54-57). The specimen plate lid is well suited for handling by a robotic material handling system. Since the lid is self-sealing with specimen plate, operator intervention is not required to mechanically seal the plate (column 2, lines 65-67). With respect to claim 4, Mainquist teaches a membrane cover having an adjustable permeability (a pore size, column 7, lines 49-54).

Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to employ a cover of Mainquist on the chamber array arrangement of Robbins in view of Skinner in order to prevent contamination and evaporation in the wells of the chamber array arrangement.

The advantage of a chamber array arrangement cover comprising a non-bonding material, which can be accurately and relatively efficiently positioned on the chamber array arrangement without additional mechanical and adhesive sealing, provides the motivation to employ a cover of Mainquist on the chamber array arrangement of Robbins with a reasonable expectation of success since the cover of Mainquist can be used for chamber array arrangement in multi-well plate format. Further, Mainquist also teaches that the cover provides a good barrier between the specimen plate wells and

the outside environment (column 2, lines 54-57) to reduce contamination and evaporation (column 1, lines 44-49). Therefore, one of ordinary skill in the art at the time of the invention would recognize that the permeability (pore size) of the membrane cover of Robbins in view of Skinner and Mainquist would intrinsically have a size smaller than the size of the probe carrier contained in the chambers of the chamber array arrangement since the membrane cover serves as a barrier between specimen plate wells/chambers in order to reduce contamination and evaporation.

Response to Arguments

8. Rejection of claims 1, 2, 5, and 6 under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Skinner

Applicant's arguments filed on March 29, 2010 have been fully considered but they are not persuasive essentially for the reasons of record and arguments addressed herein.

Applicant's argument that none of the references either by themselves or in combination with each other, teach or disclose the concept of a "probe carrier [that] is essentially freely movable in the particular chamber wherein the container is provided with a circular bottom having a surface area which is smaller than the bottom surface area of a well of a standard 24, 96, or 384 well microtiter plate" has been fully considered but is not found persuasive essentially for the reasons of record. As stated in the previous Final Office Action dated December 28, 2010, Robbins teaches a multi-well container (chamber array arrangement) comprising a rectangular array of tubes in standard multi-well plate tube array format (see entire document, particularly Abstract).

Art Unit: 1641

The multi-well container of Robbins have tubes (containers) subdivided by partitions (containers having at least two chambers) with circular bottom, which is tapered (Fig.'s 1 and 2), in standard 96-well/microtiter plate format. Therefore the circular bottom, which is tapered, is smaller than the bottom surface of a standard 96-well microtiter plate.

Further, each chamber in a tube can contain reagents necessary for use in variety of screening assays (column 1, lines 19-28 and column 5, lines 11-18). Such reagents can be stored and removed from the tubes (column 5, lines 11-18), which reads on the feature of the probe carrier essentially freely movable in said particular chamber.

Therefore, Robbins teaches the concept of a "probe carrier [that] is essentially freely movable in the particular chamber wherein the container is provided with a circular bottom having a surface area which is smaller than the bottom surface area of a well of a standard 24, 96, or 384 well microtiter plate."

In view of the foregoing response to arguments, the rejection of claims 1, 2, 5, and 6 under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Skinner has been maintained.

9. Rejection of claims 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Skinner, and further in view of Mainquist

Applicant's arguments filed on March 29, 2010 have been fully considered but they are not persuasive essentially for the reasons of record and arguments addressed above.

In view of the foregoing response to arguments, the rejection of claims 3 and 4 under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Skinner, and further in view of Mainquist has been maintained.

10. Since the prior art fulfills all the limitations currently recited in the claims, the invention as currently recited would read upon the prior art.

Conclusion

11. No claim is allowed.

12. This is a continuation of applicant's earlier Application No. 10/783,409. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1641

the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to UNSU JUNG whose telephone number is (571)272-8506. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on 571-272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Unsu Jung/
Unsu Jung
Primary Examiner
Art Unit 1641